

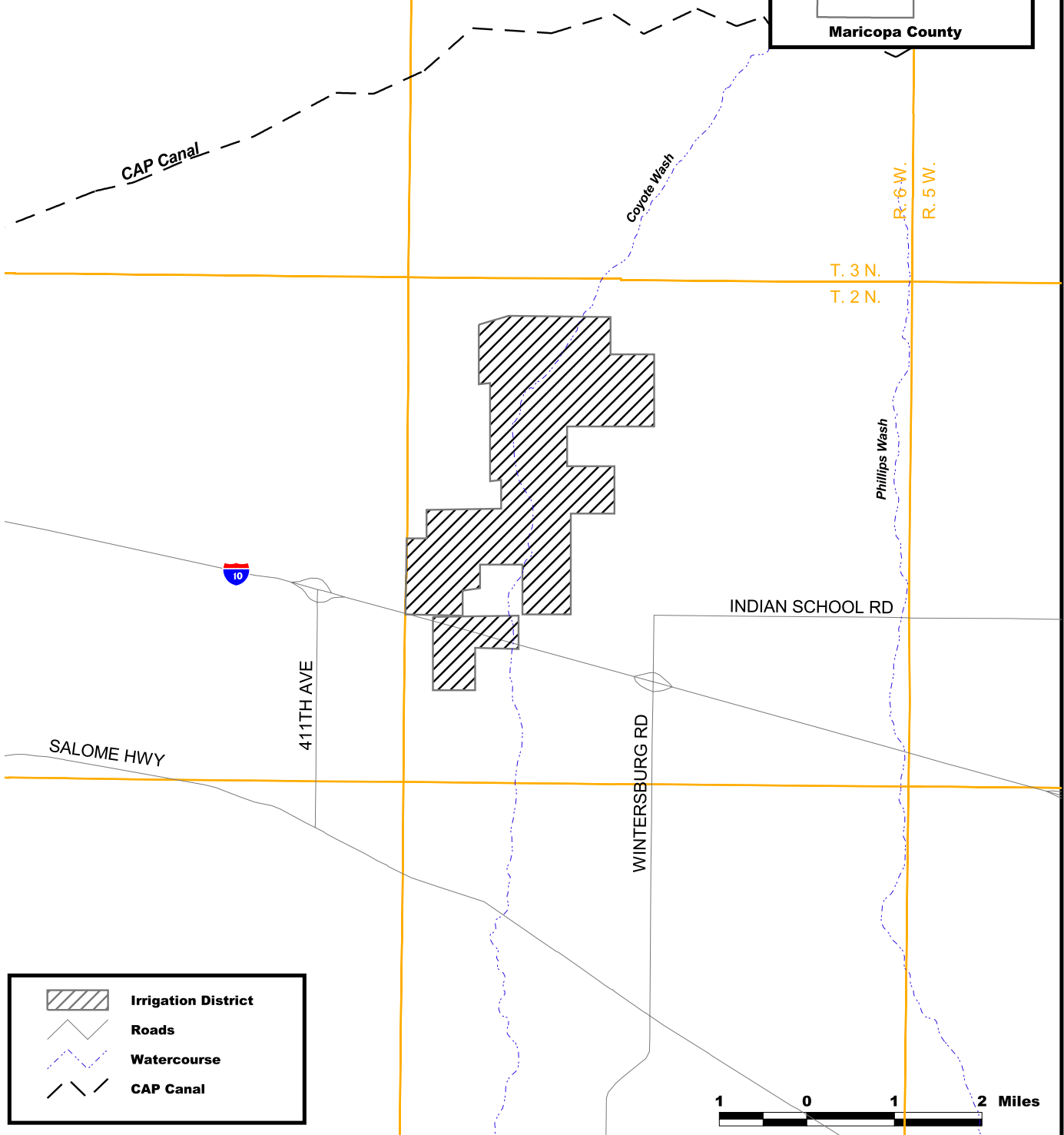
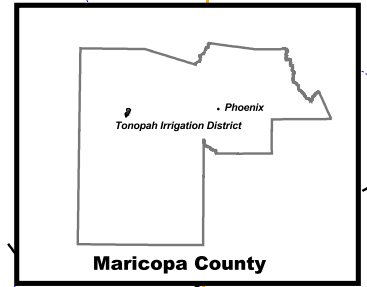
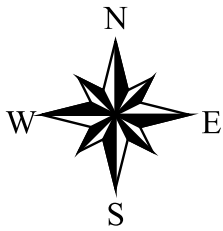
IX. TONOPAH IRRIGATION DISTRICT

The Tonopah Irrigation District (TID) is located approximately 40 miles west of Phoenix and was formed in 1977 to apply for CAP water. Interstate 10 crosses the TID in the southern portions, as shown on Figure L-NIA-18. The district has canals which are used to distribute CAP water to farms within the district. In the TID service area in 1998, a total of 9,364 af of water was produced and delivered. Of that total, 9,364 af, or all of the water, was obtained from CAP deliveries.

IX.A. CAP Water Allocation History

The TID entered into a contract with the United States and CAWCD for 1.98 percent of the available NIA pool, effective October 1, 1993. Had the 1992 NIA reallocation process been completed, TID's percentage of the available NIA would not have increased. In late 1993, TID entered into a two-party letter agreement with CAWCD under which TID and CAWCD "mutually agreed to waive certain rights and obligations under the Water Service Subcontract". The United States is challenging these agreements in ongoing litigation regarding operation of the CAP. Nevertheless, TID has contracted for CAP water pursuant to this agreement from the Ag Pools on an annual basis and at a rate reduced from the original contract requirements.

Under the Settlement Alternative, TID would voluntarily relinquish its allocation of CAP water in exchange primarily for debt relief and access to affordably priced CAP Ag Pool water for the next 30 years (see Chapter II for full description of all alternatives). Under all of the alternatives, TID would not receive an additional allocation. It should be noted that, even without an allocation, CAP water will continue to be available to TID from the Ag Pool, which is comprised of excess water. Under the Settlement Alternative TID would receive 0.42 percent of the Ag Pool. Under all other alternatives, TID would receive 1.3 percent of the Ag Pool. Table L-NIA-31 outlines the proposed CAP allocation by alternative.



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CAP Allocation Draft EIS General Location Map Tonopah Irrigation District

Figure #L-NIA-18

Table L-NIA-31 CAP Allocation DEIS TID – Proposed Additional CAP Allocation		
Alternative	Additional Allocation^a (in afa)	Priority
Settlement Alternative	0	-
No Action	0	-
Non-Settlement Alternative 1	0	-
Non-Settlement Alternative 2	0	-
Non-Settlement Alternative 3A	0	NIA
Non-Settlement Alternative 3B	0	-
Existing CAP Allocation	7,879 ^(b)	NIA
Notes: ^a All NIA allocations are percentages of the available NIA CAP water supply. They are converted to fixed af amounts only for ease of calculation in the draft EIS. See Appendix B for the calculation of NIA allocation numbers. ^b Based on 1.98 percent of the available NIA CAP water supply. The status of this allocation is in dispute.		

IX.B. Water Demand and Supply Quantities

TID contains 3,433 CAP-eligible acres and 51 acres of CAP excess lands. No new net acreage can be brought into production as a result of the 1980 GMA. Currently, TID uses approximately 9,180 afa of CAP water, of which 3,592 afa are provided as in-lieu groundwater recharge. This water use pattern is based on a five-year average from 1998 to 1994. This water use pattern could change if acreage is taken out of production due to economic reasons or urbanization. Reductions in total water use reflect reductions in farmed acres due to water costs or the lack of access to CAP water.

In order to estimate impacts for the next 50 years, assumptions were made regarding the availability and pricing of CAP water for each alternative. These assumptions are fully described in Appendix A, Background Assumptions. Using the CAP water availability as a base, a model was developed (as described in Appendix D, Socioeconomic Analysis) to project water use and the number of cropped acres based on economic decisions. For example, the economic model predicts whether or not wheat will be grown based on the marginal costs of growing wheat, given the prices and the availability of water. The water uses projected by the economic model were incorporated into the groundwater model to verify TID's ability to pump and afford the projected groundwater to be used. Acreage was also decreased based on urbanization due to population growth.

IX.C. Specific Construction-Related Impacts

No new water delivery facilities would be required with one exception. Under the Settlement Alternative, RRA restrictions may be lifted and TID may desire to build new facilities to deliver CAP water to previously ineligible lands. This possibility is considered speculative at this time and is beyond the scope of this EIS.

IX.D. Environmental Effects

Since the construction of water delivery facilities would not likely be required, the primary environmental impacts to TID would result from the availability of CAP water and its costs under the different alternatives.

IX.D.1. Land Use

Table L-NIA-32 shows the land use pattern for years 2001 to 2051 within the TID area. No land is expected to be urbanized over the study period. Approximately 550 acres are projected to be retired and fallowed due to farm economics, the timing of which varies by alternative.

Table L-NIA-32 CAP Allocation Draft EIS Tonopah ID – Projected Agricultural Land Use (Acres)				
Alternative	Year	Land Farmed	Land Urbanized Per Time Step	Land Fallowed Due to Economic Reasons per Time Step
Settlement Alternative	2001	3,031	0	0
	2004	2,485	0	546
	2017	2,485	0	0
	2030	2,485	0	0
	2043	2,485	0	0
	2051	2,485	0	0
No Action	2001	3,031	0	0
	2004	2,485	0	546
	2017	2,485	0	0
	2030	2,485	0	0
	2043	2,485	0	0
	2051	2,485	0	0
Non-Settlement Alternative 1	2001	3,031	0	0
	2004	2,485	0	546
	2017	2,485	0	0
	2030	2,485	0	0
	2043	2,485	0	0
	2051	2,485	0	0
Non-Settlement Alternative 2	2001	3,031	0	0
	2004	2,485	0	546
	2017	2,485	0	0
	2030	2,485	0	0
	2043	2,485	0	0
	2051	2,485	0	0
Non-Settlement Alternative 3A	2001	3,031	0	0
	2004	3,031	0	0
	2017	2,485	0	546
	2030	2,485	0	0
	2043	2,485	0	0
	2051	2,485	0	0
Non-Settlement Alternative 3B	2001	3,031	0	0
	2004	2,485	0	546
	2017	2,485	0	0
	2030	2,485	0	0
	2043	2,485	0	0
	2051	2,485	0	0

IX.D.2. Archaeological Resources

Only one linear survey (O'Brien et al. 1987) has taken place within this entity. The northeastern portion borders an area of moderate cultural resource sensitivity which includes agricultural rock features associated with artifact scatters (e.g., AZ T:5:13 and T:5:13(ASM). Cultural resource sensitivity areas in this entity are shown in Figure L-NIA-19. Based on the limited data used to generate the cultural sensitivity designations, the potential for cultural resource impacts in this entity is low. Urbanization of farmlands could impact any intact cultural/deposits that might be preserved below the plow zone. Mitigation for these potential impacts would be determined by local jurisdictions. No impacts to cultural resources are expected from land fallowing.

IX.D.3. Biological Resources

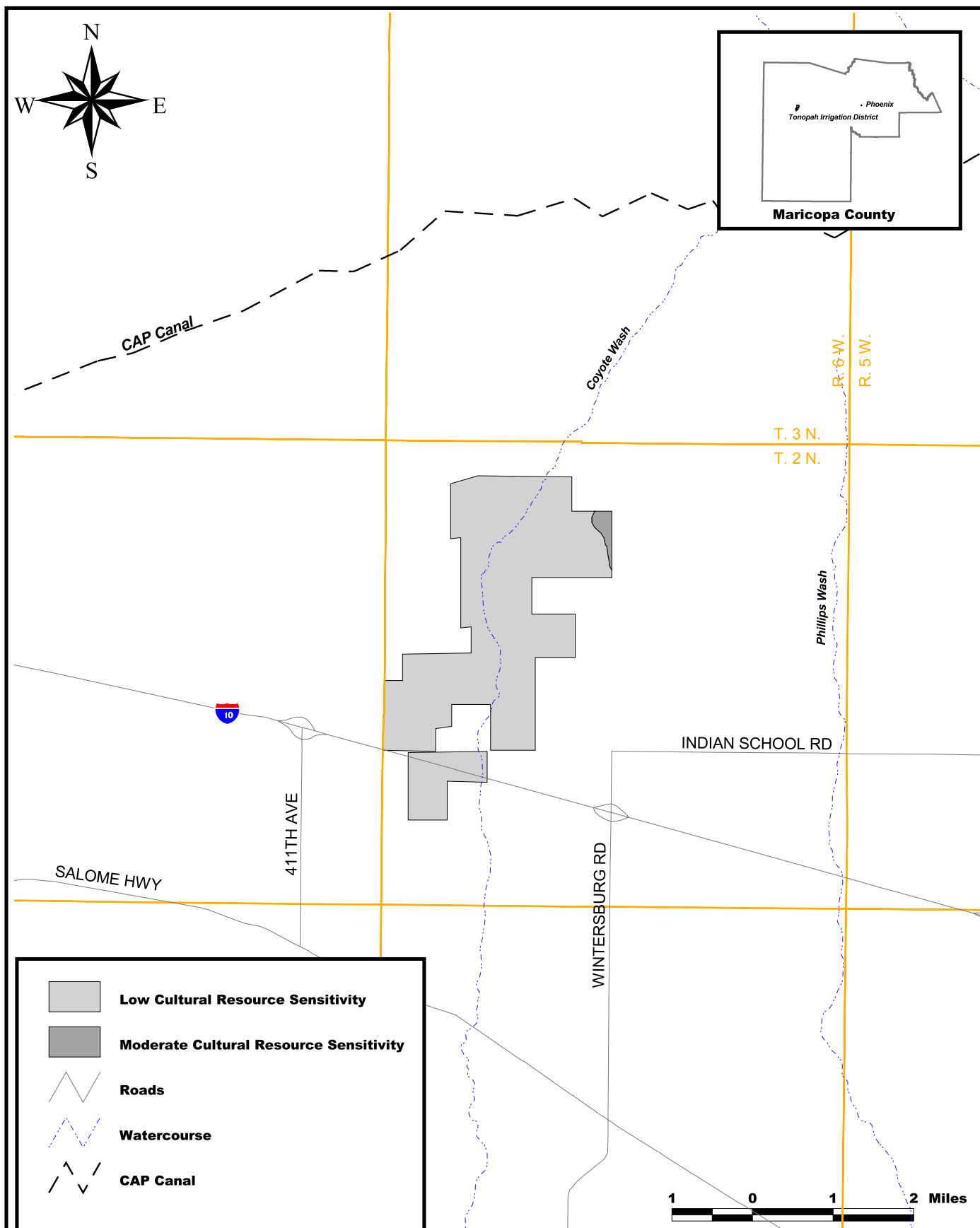
Table L-NIA-32 shows land use over the period of study by alternative. Land stays in agricultural production or is fallowed. When conversion of agricultural lands to fallow fields occurs, these fallow fields can provide fair wildlife habitat in the long term. Reclamation with natural vegetation can enhance the process of natural revegetation if these fields will not be developed in the future. Fallow fields often become areas of potential dispersal of noxious weeds.

IX.D.4. Water Resources

TID has met historical irrigation demands using groundwater, supplemented in later years with CAP water. Groundwater occurs under unconfined conditions, and groundwater levels have declined historically in response to the groundwater pumping. The TDS concentration of groundwater ranges generally from about 500 to 1,000 ppm. Subsidence has not been documented in this area.

Presented in Table L-NIA-33 are estimated changes in groundwater levels from 2001 to 2051 and estimated groundwater level impacts for each alternative. Under the No Action Alternative, groundwater levels rise through about 2017, reflecting the availability of CAP water from the Recharge Pool to TID during those years. The reduction in in-lieu recharge water beginning in 2017 results in increased groundwater pumping and declining groundwater levels. For the 2001 to 2051 period, groundwater levels decline by about 17 feet for the TID area. This magnitude of decline is not likely to substantially change the pumping costs, or cause substantial changes in groundwater quality or subsidence problems.

Groundwater levels under the Settlement Alternative and all Non-Settlement Alternatives would be lower in year 2051 than under the No Action Alternative. These lower groundwater levels reflect reduced availability of CAP water relative to the No Action Alternative. This includes reductions in both the CAP Recharge and Ag Pools. The magnitude of the declines relative to the No Action Alternative would not be likely to substantially change pumping costs or result in substantial changes in groundwater quality. There would be some increase in the potential for subsidence.



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CAP Allocation Draft EIS **Cultural Resources** **Tonopah Irrigation District**

Figure #L-NIA-19

Table L-NIA-33 CAP Allocation Draft EIS TID – Groundwater Data Table		
Alternative	Estimated Groundwater Level Change from 2001-2051 (in feet)	Groundwater Level Impact** (in feet)
No Action	-17	--
Settlement Alternative	-58	-41
Non-Settlement Alternative 1	-33	-16
Non-Settlement Alternative 2	-40	-23
Non-Settlement Alternative 3A	-43	-26
Non-Settlement Alternative 3B	-44	-27
* Values correspond to the analysis of the TID area, as discussed in Appendix I. ** Computed by subtracting the estimated groundwater decline from 2001 to 2051 for the No Action Alternative from the estimated change in groundwater level for the same period for the alternative under consideration. The estimated impact is considered to be more accurate than the estimated decline in groundwater levels.		

IX.D.5. Socioeconomic

Table L-NIA-34 shows the estimated lost agricultural gross revenues over the 50-year study period resulting from the fallowing of approximately 550 acres, the timing of which varies by alternative. For more information regarding impacts of CAP water reallocation on NIA districts, refer to Appendix D of this publication.

Table L-NIA-34 CAP Allocation Draft EIS TID Estimated Lost Gross Agricultural Revenues 2001-2051 (\$)	
Alternative	Lost Gross Revenues 2001-2051
Settlement Alternative	21,119,300
No Action	19,852,142
Non-Settlement Alternative 1	19,852,142
Non-Settlement Alternative 2	19,852,142
Non-Settlement Alternative 3A	19,852,142
Non-Settlement Alternative 3B	19,852,142